

Ehrlichiosis

What is ehrlichiosis?

Ehrlichiosis in humans in the United States is a relatively uncommon tick-borne illness caused by rickettsial organisms such as *E. chaffeensis*. CDC records show that from 1986 through 1997 only 800 cases of serologically-confirmed *E. chaffeensis* infection were diagnosed in the United States.

Who gets ehrlichiosis?

Anyone can get ehrlichiosis, although the majority of known cases have been in adults. People who spend time outdoors, in tick-infested areas from march until October are at greatest risk for exposure.

How is ehrlichiosis transmitted?

Ehrlichiosis is spread by a variety of ticks. Human monocytic ehrlichiosis (HME) is transmitted by the *Amblyomma americanum* (Lone Star tick), *Dermacentor variabilis* (American dog tick) and the deer tick. Human granulocytic ehrlichiosis (HE) is suspected of being transmitted by either the *Ixodes scapularis* or *Ixodes Pacificus* tick.

What is the incubation period of ehrlichiosis?

The average incubation period from tick bite to illness is 5 to 10 days, with a range of 7 to 21 days.

What are the symptoms of ehrlichiosis?

The early clinical presentations of ehrlichiosis may resemble nonspecific signs and symptoms of various other infectious and non-infectious diseases. Initial symptoms generally include fever, headache, malaise and muscle aches. Other signs and symptoms may include nausea, vomiting, diarrhea, cough, joint pains, confusion and occasionally a rash. In contrast to Rocky Mountain spotted fever, rash is relatively uncommon in adult patients with HME, and is rarely reported with HE. However, rash has been described in approximately 60% of pediatric patients infected with *E. chaffeensis*.

How long does the disease last?

Typically, the disease lasts from 1 to 2 weeks and recovery occurs without long-lasting problems. However, complications can occur and include respiratory problems, blood and kidney abnormalities, meningitis and other central nervous system complications. Occasionally, these complications may be life-threatening or even fatal.

What is the treatment for ehrlichiosis?

Tetracycline antibiotics are effective therapies for ehrlichiosis. These antibiotics can cause dental staining in children. Rifampin currently is being evaluated as a possible alternative treatment for children.

How can ehrlichiosis be prevented?

- Avoid tick-infested areas, especially during the warmer months.
- Wear light-colored clothing so ticks can easily be seen and removed. Wear a long-sleeved shirt, hat and long pants and tuck your pant legs into your socks.
- Walk in the center of trails to avoid overhanging grass and brush.
- Check your body every few hours for ticks when you spend a lot of time outdoors in tick-infested areas. Ticks are most often found on the thigh, arms, underarms and legs or where tight-fitting clothing has been.
- Use insect repellents containing DEET on your skin or permethrin on clothing. **Permethrin should only be used on clothing.** Be sure to follow directions on the container and wash off repellents when going back indoors. Carefully read the manufacturer's label on repellents before using on children.
- Remove attached ticks immediately.

How should a tick be removed?

- Ticks should be removed promptly and carefully by using tweezers and applying gentle, steady traction.
- Do not crush the tick's body when removing it. Apply the tweezers as close to the skin as possible to avoid leaving tick mouthparts in the skin.
- Do not remove ticks with your bare hands. Protect your hands with gloves, cloth or a tissue. Be sure to wash your hands after removing a tick.
- After removing the tick, disinfect the skin with soap and water or other available disinfectants.